A spring freeze and a bank holiday to please

Description

It’s a testament to how often British Bank Holidays disappoint that, in the 40 years since it was introduced, temperatures had never exceeded 23.6 C on the early May Bank Holiday Monday.

At least, not until this year, says Aidan McGivern – a Met Office senior weather presenter.

This year, the usual Bank Holiday washout script was torn up and re-written. Rainclouds were replaced with sunshine. Records were broken, when 28.7 °C was reached in Northolt, West London: the previous top temperature was beaten by more than five degrees.

> ??????JUST IN ?????? @RAFNortholt has reached 28.7 °C making it the hottest early May #BankHolidayWeekend on record ?? pic.twitter.com/Bg4qbi58tU
>
> — Met Office (@metoffice) May 7, 2018

For any Bank Holiday beach-goers roasting in the afternoon sunshine, it may have been hard to believe that just two months earlier large parts of the UK were blanketed in deep snow.

Hard to believe, that is, until they took a dip in the toe-numbing waters. At just 12 °C around southwest coasts and 8 °C close to the northeast, the seas were still recovering from March’s Siberian winds.

Beast from the East part one, at the beginning of the month, brought sustained and brutal cold to every part of the UK from the Isles of Scilly to Shetland. Tredegar in Wales recorded a maximum temperature on the 1st March of just -4.7 C, making it the coldest spring day in records that stretch back to 1910. Add into the mix a raw, easterly wind and many places felt a chill akin to the minus double digits.

Two rare Met Office red warnings were issued for disruptive snowfall in parts of Scotland as well as Wales and the South West between 28th February and 1st March. The snow stranded one-thousand vehicles overnight on the M80 and drivers were also stuck on roads such as the A38 and A30 in Devon.

Beast from the East part two swept across the country in mid-March and brought a return to sub-zero temperatures, icy winds and further disruptive snowfall in places.

Little wonder the seas remain so chilly in May. The air temperature may have switched from record-breaking cold to record-breaking heat in just two months but the sea has warmed sluggishly.

Water is a relatively slow conductor of heat. This means that, combined with the continuous moving and mixing of water molecules, it takes much longer for the sea to warm in spring and summer compared to the land. However, water also stays warm for longer – leading to a delay in cooling during autumn and winter.

> We saw record breaking #BankHolidayWeekend temperatures but did you notice how cold the sea was? Sea temperatures are slightly below average for early May, thanks to colder weather we had earlier in the spring ?? pic.twitter.com/H5UqsUmMUi
>
> — Met Office (@metoffice) May 8, 2018

These lag effects in warming and cooling can lead to a sea temperature frequently at odds with the surrounding air temperature from season to season. It's also why the UK, a small island nation surrounded by seas, doesn't often experience extremes of temperature.

The largest expanse of water near our shores lies to the west in the form of the Atlantic Ocean and that's where our weather comes from much of the time. The jet stream, a ribbon of fast-flowing air high in the sky, tends to act as an atmospheric conveyor belt. Low-pressure systems form over the Atlantic and are carried towards the British Isles by the jet stream above, which typically flows from west to east.

When the jet stream is strong, we receive a full complement of cloud, wind and rain from the west. Atlantic weather, as well as being blustery and damp, acts as the UK's thermostat, keeping us in mild winters and cool summers.

At times during Spring 2018, however, this moderating influence has been notably absent, resulting in some exceptional weather. A particularly dominant area of high pressure built up over Scandinavia during March. Known as a blocking anticyclone, this Scandinavian High held off the usual Atlantic westerlies and sent Siberian easterlies towards the UK. Beast from the East arrived – not once, but twice.

Fast forward to the early May Bank Holiday weekend and we encountered another blocking anticyclone lodged to the east of the British Isles. Once again, Atlantic winds en route to the UK were stopped. This time, however, Siberian winds had lost their bite. By May, winds from the continent tend to be warm and sunny.

Record-breaking cold early in spring followed by record-breaking heat later in the season; two very different outcomes but both the result of a Scandinavian High. However, whilst a blocking anticyclone can disrupt the eastward-moving jet stream, a weakened jet stream is ultimately responsible for the formation of blocking anticyclones. This 'chicken and egg' scenario illustrates just how complex and interconnected global weather patterns can be.

In fact, it's during spring in particular that we are most likely to find blocking anticyclones and weakened jet streams. The jet stream is fuelled by temperature contrasts across the Northern Hemisphere and during spring these contrasts decline as continents warm but oceans remain cool.

For that reason, it's not unusual at this time of year to find slow, meandering jet streams, blocking anticyclones, and continental-style swings in temperature in the UK.

The causes of Spring 2018's particularly pronounced cold and hot spells are complex and varied. March's Siberian easterlies were a response to a dramatic wind reversal 80,000 feet above the North Pole in the Stratosphere. This itself can be traced back to lively thunderstorms in the tropical West

Pacific during January, which produced energetic reverberations high in the atmosphere throughout the Northern Hemisphere.

> Remember the March Beast from the East? Now that it's #spring, the easterly wind is bringing warm air across the UK in time for the #BankHolidayWeekend pic.twitter.com/mBNVFXqa3Q
>
> — Met Office (@metoffice) May 4, 2018

This year’s warm Bank Holiday Monday is more likely to be a quirk of fate. After all, particularly warm temperatures during early May are not unheard of, they’ve just never coincided before with the early May Bank Holiday Monday. It’s only taken 40 years for our fortunes to change.

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May 2018

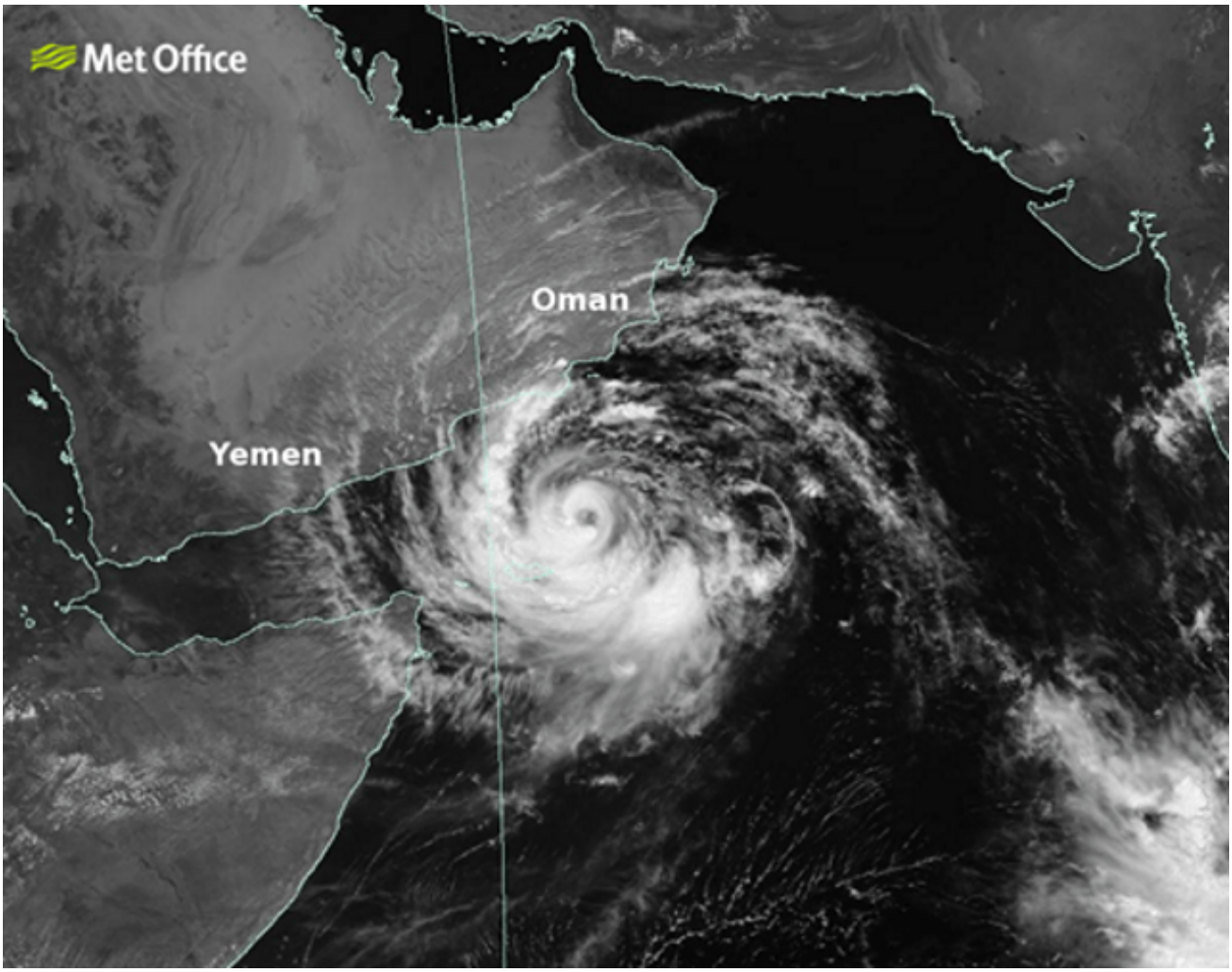
Cyclone Mekunu closes in on Oman

Description

In the two months prior to the onset of the Indian monsoon in early June, cyclones occasionally form in the North Indian Ocean. This year so far has seen the formation of two cyclones in the region – Sagar and Mekunu.

Cyclonic Storm Sagar formed in the entrance to the Gulf of Aden just over a week ago and unusually tracked along the length of the Gulf before eventually making landfall over Somalia, bringing heavy rain and flooding to northwestern parts of the country and neighbouring Djibouti.

No sooner had Sagar dissipated, another cyclonic storm developed and was named Mekunu. This cyclone formed some distance offshore in the Arabian Sea and has had several days to gather strength. Mekunu is now classified as a Very Severe Cyclonic Storm and is equivalent to a Category 2 hurricane. Mekunu is currently expected to make landfall close to the city of Salalah in southern Oman overnight Friday into Saturday UK time. Winds near 100 mph and 250-500 mm rain are possible, which is likely to cause damage to buildings and flash flooding. This region has an annual average rainfall of just 100-150 mm.



Cyclone Mekunu over the Arabian Sea on 24 May 2018

Cyclones of the strength of Mekunu have made landfall over the Arabian Peninsula in the recent past. In 2015 Cyclone Chapala brought flash flooding as it came ashore over Yemen. Cyclone Phet brought strong winds and heavy rain to northern Oman when it made landfall in 2010. The strongest cyclone on record to make landfall over the Arabian Peninsula was Gonu in 2007. This cyclone hit the far northeastern tip of Oman with winds in excess of 100 mph.

Mekunu will be making landfall over the central part of the Arabian Peninsula close to the border between Oman and Yemen. The historical record reveals that strong cyclones over this part of the peninsula are relatively rare. The most recent strong cyclones to make landfall close to the city of Salalah occurred in 1963 and 1959. The former produced over 200 mm rain and caused severe sandstorms. The latter caused flooding and severe damage to buildings.

Further Information

Official warnings for the latest tropical cyclones in the North Indian are issued by the India

Meteorological Department. The Met Office routinely supplies predictions of cyclone tracks from its global forecast model to regional meteorological centres worldwide, which are used along with guidance from other models in the production of forecasts and guidance. We also provide updates on current tropical storms via @metofficestorms on Twitter.

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May 2018